

**OPINION 2320 (Case 3536)*****Stegosaurus* Marsh, 1877 (Dinosauria, Ornithischia): type species replaced with *Stegosaurus stenops* Marsh, 1887**

**Abstract.** The Commission has preserved stability in the taxonomy of stegosaurian dinosaurs by replacing *Stegosaurus armatus* Marsh, 1877, the unidentifiable type species of the ornithischian dinosaur genus *Stegosaurus* Marsh, 1877, with the very well represented nominal species *Stegosaurus stenops* Marsh, 1887, also from the Upper Jurassic Morrison Formation, U.S.A.

**Keywords.** Nomenclature; taxonomy; Dinosauria; Ornithischia, Stegosauria, STEGOSAURIDAE; STEGOSAURINAE; *Stegosaurus*; *Stegosaurus armatus*; *Stegosaurus stenops*; western U.S.A.; Upper Jurassic.

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**Ruling**

- (1) Under the plenary power the Commission has set aside all previous fixations of type species for the nominal genus *Stegosaurus* Marsh, 1877 and designated *Stegosaurus stenops* Marsh, 1887 as the type species.
- (2) The name *Stegosaurus* Marsh, 1877 (gender: masculine), type species *Stegosaurus stenops* Marsh, 1887, as ruled in (1) above, is hereby placed on the Official List of Generic Names in Zoology.
- (3) The name *stenops* Marsh, 1887, as published in the binomen *Stegosaurus stenops* (specific name of the type species of *Stegosaurus* Marsh, 1877, as ruled in (1) above), is hereby placed on the Official List of Specific Names in Zoology.

**History of Case 3536**

An application to preserve stability in the taxonomy of stegosaurian dinosaurs by replacing *Stegosaurus armatus* Marsh, 1877, the unidentifiable type species of the ornithischian dinosaur genus *Stegosaurus* Marsh, 1877, with the very well represented nominal species *Stegosaurus stenops* Marsh, 1887, also from the Upper Jurassic Morrison Formation, U.S.A., was received from Peter M. Galton (*College of Naturopathic Medicine, University of Bridgeport, Bridgeport, CT, & Peabody Museum of Natural History, Yale University, New Haven, CT, U.S.A.*) on 20 September 2010. After correspondence the case was published in BZN 68: 127–133 (2011). The title, abstract and keywords of the case were published on the Commission's website. Comments were published in BZN 68: 213–217 and 69: 63–64.

**Decision of the Commission**

On 1 December 2012 the members of the Commission were invited to vote on the proposals published in BZN 68: 131. At the close of the voting period on 1 March 2013 the votes were as follows:

Affirmative votes – 22: Alonso-Zarazaga, Ballerio, Brothers, Fautin, Grygier, Halliday, Harvey, Krell, Kottelat, Kullander, Lamas, Lim, Minelli, Pape, Patterson, Rosenberg, Štys, van Tol, Winston, Yanega, Zhang and Zhou.

Negative votes – 3: Bogutskaya, Bouchet and Kojima.

Pyle and Ng were on leave of absence.

Voting FOR, Grygier quoted a comment (BZN 69: 63–64) in which Demirjian urged ‘the Commission to address the priority of *S. unguatus* over *S. stenops*’, but noted that he did not make any explicit proposal. Grygier said that although the Comment was somewhat confused in that *S. unguatus* (dated 1879) could not ‘become a junior subjective synonym of *S. stenops*’ (dated 1887), he felt that the point was well taken in that even if the Commission designates *S. stenops* as the type species of *Stegosaurus*, ontogenetic study might cause it to vanish into the synonymy of *S. unguatus*. Grygier suggested that Demirjian was perhaps hinting at a supplementary proposal to give *S. stenops* conditional precedence over *S. unguatus* in case of synonymy, an idea which has merit and should be borne in mind for future formal consideration. Also voting FOR, Halliday said that it was not necessary for the Commission to make any statement about the status of *ungulatus*. If further taxonomic research should show that *ungulatus* was a subjective synonym of *stenops*, that would not affect the status of *stenops* as the type species of *Stegosaurus*.

Voting AGAINST, Bouchet said that if the type material of *Stegosaurus armatus* Marsh, 1877 was considered unidentifiable, then the proposals addressed only part of the consequences. He said it would have been preferable to set aside this type material and to designate the holotype (USNM 4934) of *S. stenops* as holotype of *S. armatus*, thus establishing the identity of both the species *S. armatus* and the genus *Stegosaurus*. The technical solution offered by the applicant left the name *Stegosaurus armatus* in limbo. Also voting AGAINST, Kojima commented that the reasoning for replacement of the type species of *Stegosaurus* Marsh, 1877, i.e. *Stegosaurus armatus* Marsh, 1877 to be replaced with *Stegosaurus stenops* Marsh, 1887, was more taxonomic than nomenclatural. He said that a species was not necessarily monophyletic, and thus all the diagnostic characters of a species were not necessarily the autapomorphic characters for the species, and the fact that the holotype of *Stegosaurus armatus* Marsh, 1877 lacked parts representing putative autapomorphic characters for *Stegosaurus armatus* in its current usage could not be the reason to consider *Stegosaurus armatus* Marsh, 1877 a nomen dubium. Moreover, the concept of a taxon to which a name was attached could not be defined by its type specimen, as a type was purely a nomenclatural standard.

### Original references

The following are the original references to the names placed on Official Lists and Indexes by the ruling given in the present Opinion:

*Stegosaurus* Marsh, 1877, *American Journal of Science*, (3)14: p. 513.

*stenops*, *Stegosaurus*, Marsh, 1887, *American Journal of Science*, (3)34: 414.